

# BRIDGE 2.0

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## BRIDGE 2.0

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### PROGRAM DESCRIPTION:

BRIDGE 2.0 is a program in which the player is joined by a computer partner against two computer opponents in the game of contract bridge. The program consists of two parts; bidding for the contract, and playing the hand.

BRIDGE 2.0 "shuffles" the cards by using the built-in RND function of your computer. For those versions of BRIDGE 2.0 which require inputting a "seed" for the random number generator, the same seed value will produce the same sequence of hands. This allows the replay of interesting hands, or the play of "duplicate" bridge. Duplicate bridge is played with another individual whereby each player plays the same hands (by using the same seed value) to see who can take more tricks.

Once the "cards" are shuffled and dealt, SOUTH'S hand is displayed, ordered and sorted into suits. For entering a bid in a suit, a two-character format is used in which the first character is the level of the bid, and the second character is the suit abbreviation; i.e., '1C' represents a bid of one club, '4S' is a bid of four spades etc. To pass, simply input either a 'P' or type the word 'PASS'. For a bid in no trump, follow the bid level character with 'NT'; i.e., '3NT' would indicate a bid of three no trump.

BRIDGE 2.0 allows a bid to be doubled (the program will also double your bid if you bid too high!). This is accomplished by entering 'DBL' as your bid. Note that for passing or for doubling, an input starting with 'P' will be taken as a pass by the computer, and an input starting with 'D' will be taken as a double. However, any other input will be accepted by the computer as a legal bid, thus one must take some care in entering bids. A typographical error such as inputting 3A rather than 3S will upset the bidding routine and you may arrive at an improper contract. BRIDGE 2.0 checks to see if each bid is higher than the previous bid; if it is not, an error message will be printed out and you will be prompted to input your bid once again.

Bidding is completed after three successive passes have been recorded. When this occurs, the program determines the winning contract and the declarer of that contract. A review of the bidding is then printed out for your information. When you are ready to play, simply depress the <RETURN> or <ENTER> key and the play of the hand will commence.

For the play of the hand, your hand (SOUTH) is printed out along with the dummy's hand. After each round of play, the bid and current trick count for WE and THEY will be printed out along with your hand and the dummy's hand minus the cards played in the previous round. Note that selecting a card requires a two-character format. The first character is the value of the card (A=ace, J=jack, T=ten, 5=five, etc.) and the

last character is the suit abbreviation. When inputting the card to be played, the computer checks to see if that card is indeed in your hand. The computer also checks to see if you have followed suit or if you made a typographical error. If an error is made, a message is printed and you are prompted to select another card. When play is completed (after all 13 tricks have been taken), you will be informed whether or not the contract was made and either how many overtricks were made, or by how many tricks the contract was set. At this point, if you wish to continue with another hand, simply answer the prompt 'CONTINUE?' with either 'Y' or 'YES'. If you do not wish to continue, enter 'N' or <RETURN> and the program will return you to BASIC.

#### BIDDING CONVENTIONS:

In order to play contract bridge well, you and your partner must be able to communicate with each other intelligently via your bidding. Due to the memory limitations placed on BRIDGE 2.0, it is impossible to completely incorporate all of Goren's point-count bidding system into a program which both bids and plays. The following paragraphs contain helpful hints on how to interpret your computer partner's bidding.

During the first round of bidding, proceed "by the book". Your partner (NORTH) will open at the one level with its strongest suit if it has 13 or more points. NORTH will open with a two bid if that hand has over 22 points. NORTH will open with one no trump if the hand contains between 16 and 18 points with equal suit distribution.

NORTH will respond to your opening bid in the following manner. A simple rebid in your suit (i.e., NORTH responds '2H' to your opening '1H') indicates a hand containing less than ten points but with support for your suit. Support is considered to be at least three cards including an honor (picture card), or a minimum of four cards without an honor. A one no trump response indicates six to nine points with little support in your suit. A simple overcall (i.e., NORTH responds '2D' to your opening bid of '1H') indicates a hand with at least ten points with strength in the suit bid. A jump bid in your suit ('3H' response to your '1H') shows a hand with good support for your suit and at least 14 points. A jump shift (i.e., a response of '2S' to your '1D') shows more than 18 points.

The previous descriptions follow the Goren point-count system rather closely. After the opening bid and initial response however, it becomes more difficult to extract information from your partner. NORTH has four bidding options available: (1) continue bidding NORTH's best suit, (2) support your suit, (3) bid no trump or (4) pass. BRIDGE 2.0 does not enable the electronic partners to open any new suits. If you open with a diamond bid and then switch to a different suit (other than your partner's suit), NORTH will only bid in its own suit, your initial suit or no trump.

On occasion, your partner will bid in your suit with what may seem like insufficient support, i.e., only two cards in your suit. This occurs because your partner had determined that the contract would be better in

your suit than in NORTH's best suit. Generally speaking, you can expect the proper contract to be bid about 75% of the time (which is about par for many human partnerships).

#### PLAY:

The play of the hand in BRIDGE 2.0 is straightforward. Generally, when a hand leads a card, it is to its partner's strongest suit. The program can keep track of each hand's strengths and voids and knows when to pull trump and when to ruff a trick. It plays a strong defensive game.

Remember that when inputting a card to be played, use a two character format where the first character is the value of the card, and the second character is the suit. Use 'A' for ace, 'K' for king, 'Q' for queen, 'J' for jack and 'T' for the 10 of a suit. For card values less than a ten, use the appropriate numeric character.